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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/718,338	11/18/2003	Anand G. Dabak	TI-28984.1	9249

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TEXAS INSTRUMENTS INCORPORATED
P O.BOX 655474, M/S 3999
DALLAS, TX 75265

EXAMINER	
PATEL, CHANDRAHAS B	

ART UNIT	PAPER NUMBER
2616	

NOTIFICATION DATE	DELIVERY MODE
06/08/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

uspto@ti.com
uspto@dlemail.itg.ti.com

Office Action Summary	Application No.	Applicant(s)	
	10/718,338	DABAK ET AL.	
	Examiner	Art Unit	
	Chandrahas Patel	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *31 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *28-35 and 39-49* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *28-35 and 39-49* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 November 2003* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *5/31/2005, 11/18/2003*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: Fig. 2 – reference numeral 210, Fig. 6B – reference numerals 640, 642, 643, 652, 654, 658, 660, 662, 664, 656, 666, Fig. 8 – reference numerals 808, 810, Fig. 9B – reference numerals 910, 912, 914, 916, 918, 920, 922, Fig. 10A – reference numerals 1002, 1004, 1006, Fig. 10B – reference numerals 1010, 1012, 1016, 1018, 1020, 1022, Fig. 13A – reference numerals 1300, 1306, 1308 are not described in specification. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 28, 35, 39-41, 49 are rejected under 35 U.S.C. 102(e) as being anticipated by Whinnett et al. (USPN 6,317,411, Herein as Whinnett).

Regarding claim 28, Whinnett teaches a circuit, comprising an encoder circuit coupled to receive a plurality of symbols **[Fig. 5, 20]**, the encoder circuit producing the plurality of symbols at a first output terminal **[Fig. 5, top line output of 88]** and a transform of the plurality of symbols at a second output terminal within a time slot **[Fig. 5, bottom line output of 88 which is a transform of original data]**, the encoder circuit producing a sequence of predetermined signals interposed with the plurality of symbols **[Fig. 5, 92 adds predetermined signals]**.

Regarding claims 35 and 49, Whinnett teaches the sequence of predetermined signals comprises a code sequence **[Col. 5, lines 12-16]**, and wherein a first shift of the code sequence corresponds to the first output terminal and a second shift of the code sequence corresponds to the second output terminal **[Col. 5, lines 28-35]**.

Regarding claim 39, Whinnett teaches a circuit, comprising an encoder circuit coupled to receive a plurality of symbols **[Fig. 5, 20]**, the encoder circuit producing the plurality of symbols and a sequence of predetermined signals at a first **[Fig. 5, top line output of 88]** and a second output terminal **[Fig. 5, bottom line output of 88]**, wherein the sequence of predetermined signals comprises a code sequence **[Col. 5, lines 12-**

16], and wherein a first shift of the code sequence corresponds to the first output terminal and a second shift of the code sequence corresponds to the second output terminal **[Col. 5, lines 28-35]**.

Regarding claim 40, Whinnett teaches a circuit comprising: an encoder circuit coupled to receive a plurality of first symbols corresponding to a first user **[Fig. 5, 20]**, the encoder circuit producing the plurality of first symbols at a first output terminal **[Fig. 5, top line output of 88]** and a transform of the plurality of first symbols at a second output terminal within a time slot **[Fig. 5, bottom line output of 88 which is a transform of original data]**; a first multiplier circuit coupled to receive the plurality of first symbols and arranged to multiply the plurality of first symbols by a code corresponding to the first user to produce a first coded signal **[Fig. 5, 92]**, wherein the first coded signal is applied to a first antenna **[Fig. 5, 100]**; and a second multiplier circuit coupled to receive the transform of the plurality of first symbols and arranged to multiply the transform of the plurality of first symbols by the code corresponding to the first user to produce a second coded signal **[Fig. 5, 92]**, wherein the second coded signal is applied to a second antenna **[Fig. 5, 102]**.

Regarding claim 41, Whinnett teaches a third multiplier circuit coupled to receive a plurality of second symbols and arranged to multiply the plurality of second symbols by a code corresponding to a second user to produce a third coded signal **[Fig. 5, 94]**.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 29-31, 43-45 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whinnett et al. (USPN 6,317,411, Herein as Whinnett) in view of Secord et al. (USPN 6,373,831, Herein as Secord).

Regarding claims 29 and 43, Whinnett teaches a circuit as discussed in rejection of claim 28 and 40.

However, Whinnett does not teach that circuit is coupled to receive a control signal, the encoder circuit producing the plurality of symbols at the first output terminal and the transform of the plurality of symbols at the second output terminal in response to a first value of the control signal, the encoder circuit producing the plurality of symbols at the first output terminal and not producing the transform of the plurality of symbols at the second output terminal in response to a second value of the control signal.

Secord teaches circuit is coupled to receive a control signal, the encoder circuit producing the plurality of symbols at the first output terminal and the transform of the plurality of symbols at the second output terminal in response to a first value of the control signal, the encoder circuit producing the plurality of symbols at the first output terminal and not producing the transform of the plurality of symbols at the second output

terminal in response to a second value of the control signal **[Col. 5, lines 43-49, power control bits which transforms the signal are only inserted depending on output signal of MUX 40 in Fig. 5]**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to decide whether to transform or not plurality of symbols at second output terminal to provide additional time diversity **[Col. 5, lines 37-39]**.

Regarding claims 30 and 44, Secord further teaches a diversity control circuit coupled to receive a first input signal, the diversity control circuit producing the control signal corresponding to the first input signal **[Col. 5, lines 39-43, MUX 40 in Fig. 5 produces the control signal corresponding to the first input signal from 20]**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a diversity control circuit to randomize error bursts **[Col. 5, lines 39-43]**.

Regarding claims 31 and 45, Secord further teaches the first input signal corresponds to a Doppler frequency **[Col. 5, lines 46-49]**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a Doppler frequency as the input signal to achieve frequency diversity **[Col. 5, lines 46-49]**.

6. Claims 32, 33, 46, 47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whinnett et al. (USPN 6,317,411) in view of Secord et al. (USPN 6,373,831) as

applied to claims 31, 30, 45, 44 above respectively, and further in view of Kang et al. (USPN 6,487,191, Herein as Kang).

Regarding claims 32 and 46, the references teach a circuit as discussed in rejection of claims 31 and 45.

However, the references do not teach the diversity control circuit is further coupled to receive a second input signal corresponding to a handoff signal.

Kang teaches the diversity control circuit is further coupled to receive a second input signal corresponding to a handoff signal **[Col. 7, lines 7-12 – Col. 8, lines 1-8]**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a second input signal corresponding to a handoff signal so that power increase request information is only sent to a base station whose signal-to-noise ratio is the largest so that that base station starts modulating encoded signals **[Col. 7, lines 7-12 – Col. 8, lines 1-8]**.

Regarding claims 33 and 47, the references teach a circuit as discussed in rejection of claims 30 and 44.

However, the references do not teach the first input signal corresponds to a handoff signal.

Kang teaches that the first input signal corresponds to a handoff signal **[Col. 7, lines 7-12 – Col. 8, lines 1-8]**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have a first input signal corresponding to a handoff signal so that power increase request information is only sent to a base station whose signal-to-noise

ratio is the largest so that that base station starts modulating encoded signals **[Col. 7, lines 7-12 – Col. 8, lines 1-8]**.

7. Claims 34 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whinnett et al. (USPN 6,317,411, Herein as Whinnett) in view of Bohnke et al. (USPN 6,567,374, Herein as Bohnke).

Regarding claims 34 and 48, Whinnett teaches a circuit as discussed in rejection of claim 28 and 40.

However, Whinnett does not teach the encoder circuit produces a midamble of the predetermined signal interposed with the plurality of symbols.

Bohnke teaches producing a midamble of the predetermined signal interposed with the plurality of symbols **[Fig. 2]**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to produce a midamble of he predetermined signal so that midamble can be used to transmit symbols to be used to provide time and frequency synchronization **[Abstract]**.

8. Claim 42 is rejected under 35 U.S.C. 103(a) as being unpatentable over Whinnett et al. (USPN 6,317,411, Herein as Whinnett) in view of Takahashi (USPN 6,396,821).

Regarding claim 42, Whinnett teaches a circuit as discussed in rejection of claim 41.

However, Whinnett does not teach the third coded signal is applied to the first antenna and not the second antenna.

Takahashi teaches a coded signal is applied to the first antenna and not the second antenna **[Col. 5, lines 8-15]**.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to apply a signal to one antenna and not the other antenna so that diversity transmission control can be carried out **[Col. 5, lines 22-25]**.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chandrahas Patel whose telephone number is 571-270-1211. The examiner can normally be reached on Monday through Thursday 7:30 to 17:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

CBP

RICKY Q. NGO
SUPERVISORY PATENT EXAMINER